Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A gait monitoring system for monitoring gait characteristics of a subject, said system comprising:

        a sensor module configured to touch an upper surface of a floor, the sensor module configured to <u>while touching the upper surface of the floor</u> detect at least one of floor acceleration, floor vibration, and floor deflection and to provide at least one of an acceleration, vibration, and deflection signal, wherein the subject can walk on the upper surface of the floor in proximity to said sensor module; and

        a processor module that is configured to analyze the acceleration, vibration, and deflection signal and to determine gait characteristics based on the signal,

        wherein, the processor is configured to determine the gait characteristics based on the at least one signal from ~~only~~ a single sensor module; and

        the processor is configured to <u>recognize that data is consistent with the fall of a human being by distinguishing</u> ~~distinguish~~ between steps of a human being and a fall of a human being.

2.   (Previously Presented) The system of claim 1, further comprising: an output module for receiving data indicative of the gait characteristics.

3.   (Previously Presented) The system of claim 2, wherein said output module comprises at least one of display, alarm, memory storage, communication device, printer, buzzer, PDA, lap top computer, computer, audio or visual alarm, and light.

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4.   (Previously Presented) The system of claim 3, wherein said communication device comprises at least one of modem, pager, network interface, Ethernet card, serial communications port, parallel communications port, telephone, and PCMCIA slot and card.

5.   (Original) The system of claim 1, wherein said sensor module and processor module are in wireless communication.

6.   (Previously Presented) The system of claim 5, wherein said wireless communication comprises at least one of RF link, an infrared, cellular phone link, optical and electromagnetic.

7.   (Original) The system of claim 1, wherein said sensor module and processor module are in a hard wired communication.

8.   (Previously Presented) The system of claim 7, wherein said hard wired communication comprises at least one of electronic, integrated circuit, electromagnetic, wire, cable, fiber optics, a phone line, twisted pair, and coaxial.

9.   (Original) The system of claim 1, further comprising: a rate-of-travel detector to determine the rate-of-travel of the subject.

10.   (Previously Presented) The system of claim 9, wherein said rate-of-travel detector comprises at least one of a plurality of beam breaks, floor switches, and door switches.

11.   (Previously Presented) The system of claim 9, wherein said rate-of-travel detector comprises at least one of ultrasonic communication, IR communication, laser communication, ground radar communication, wide band radar communication, and doppler communication.

12.   (Canceled)

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13.   (Previously Presented) The system of claim 1, wherein said gait characteristics of the subject includes at least two of step count, pace, normal gait condition, limp, shuffle, and falls.

14.   (Canceled)

15.   (Previously Presented) The system of claim 1, further comprising an archival storage module.

16.   (Previously Presented) The system of claim 15, wherein the processor module is configured to perform at least two of longitudinal analysis of gait characteristics, pattern recognition, and identification determination, wherein identification determination associates gait characteristics with a particular subject and said archival storage module stores the at least two of longitudinal analysis of gait characteristics, pattern recognition, and identification determination.

17.   (Canceled)

18.   (Previously Presented) The system of claim 1, further comprising: a second processor module, wherein said second processor module is configured to analyze gait characteristics, pattern recognition, and identification determination data, the identification determination data associating gait characteristics with a particular subject.

19.   (Previously Presented) The system of claim 1, wherein the subject is one of a human and an animal.

20.   (Canceled)

21.   (Currently Amended) The system of claim 1, further comprising a fall module configured to:

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processes data received from said sensor module;

recognize ~~that the~~ data ~~that~~ is consistent with the fall of a human body; and

provide notification of a fall based on the recognized data.

22.   (Previously Presented) The system of claim 1, further comprising a step module configured to process data received from said sensor module.

23.   (Original) The system of claim 1, further comprising: a second processor module in communication with said system.

24.   (Withdrawn – Currently Amended) A method for monitoring gait characteristics of a subject, said method comprising:

detecting at least one of a floor acceleration, a floor vibration, and a floor deflection to provide at least one of an acceleration, vibration, and deflection signal, wherein said detecting is provided by a sensor module touching an upper surface of a floor, and wherein the subject walks on the upper surface of the floor in proximity to said sensor module;

analyzing the at least one signal; and

determining gait characteristics based on the at least one signal,

wherein, the gait characteristics are determined based on the at least one signal from ~~only~~ a single sensor module; and

the analyzing further includes <u>recognizing that data is consistent with the fall of a human being by</u> distinguishing between steps of a human being and a fall of a human being.

25.   (Withdrawn) The method of claim 24, further comprising: outputting data indicative of the gait characteristics.

26.   (Withdrawn) The method of claim 25, wherein said outputting is provided by an output module that comprises at least one of display, alarm, memory storage, communication device, printer, buzzer, PDA, lap top computer, computer, audio or visual alarm, and light.

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27.   (Withdrawn) The method of claim 26, wherein said communication device comprises at least one of modem, pager, network interface, Ethernet card, serial communications port, parallel communications port, telephone, and PCMCIA slot and card.

28.   (Withdrawn) The method of claim 24, further comprising: detecting rate-of-travel of the subject to determine the rate-of-travel of the subject.

29.   (Withdrawn) The method of claim 28, wherein said detecting the rate-of-travel is provided by a rate-of-travel detector.

30.   (Withdrawn) The method of claim 28, wherein said detecting the rate-of-travel comprises at least one of ultrasonic communication, IR communication, laser communication, ground radar communication, wide band radar communication, and doppler communication.

31.   (Canceled)

32.   (Withdrawn) The method of claim 24, wherein the gait characteristics of the subject includes at least two of step count, pace, normal gait condition, limp, shuffle, and falls.

33.   (Canceled)

34.   (Withdrawn) The method of claim 24, further comprising: storing archival information or data.

35.   (Withdrawn) The method of claim 34, wherein the storing of archival information or data is provided by an archival storage module that stores at least two of longitudinal analysis of gait characteristics, pattern recognition, and identification determination, the identification determination associating gait characteristics with a particular subject..

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36.   (Withdrawn) The method of claim 35, further comprising: analyzing the gait characteristics, pattern recognition, and identification determination data.

37.   (Withdrawn) The method of claim 24, wherein the subject is one of a human and animal.

38.   (Canceled)

39.   (Withdrawn) The method of claim 24, further comprising: automatically identifying signals indicative of a human body falling to determine fall data.

40.   (Withdrawn) The method of claim 24, further comprising: analyzing step data from the at least one signal.

41.   (Currently Amended) A computer program product comprising <u>non-transitory</u> computer usable medium having computer logic embedded thereon for enabling at least one processor in a computer system to monitor gait characteristics of a subject, said computer logic configured to cause the computer system to:

 receive at least one of a floor acceleration, a floor vibration, and a floor deflection signal, wherein said at least one signal is provided by a sensor module touching an upper surface of a floor, and wherein the subject can walk on the upper surface of the floor in proximity to said sensor module; and

 analyze the at least one signal; and

 determine gait characteristics based on the at least one signal,

 wherein, the gait characteristics are determined based on the at least one signal from a single sensor module; and

 the analyzing further including <u>recognizing that data is consistent with the fall of a human being by</u> distinguishing between steps of a human being and a fall of a human being.

42.   (Currently Amended) A gait monitoring system, said system comprising:

        a sensor device comprising:

                a housing configured to be placed on a floor surface in a freestanding position;
and

                a sensor configured to:

                        touch the floor surface;

                        detect <u>while touching the floor surface</u> at least one of floor acceleration,
floor vibration, and floor deflection; and

                        generate a signal based on the detected at least one of floor acceleration,
floor vibration, and floor deflection;

        a processor unit configured to communicate with the sensor device and determine gait

characteristics based on the signal, the determined gait characteristics including identifying at

least two of a normal gait characteristic, an abnormal gait characteristic and a human body fall;

and

        an output device configured to output the determined gait characteristics, the output

including different outputs for the at least two of normal gait characteristic, abnormal gait

characteristic and human body fall.

43.   (Currently Amended) The system of claim 42. wherein the processor unit is configured to

determine the gait characteristics based on the signal from ~~only~~ a single sensor device.

44.   (New) The system of claim 42, wherein the processor unit is configured to identify the

human body fall based on filtering out a frequency corresponding to at least one of walking

modes and dropped objects.

45.   (New) The method of claim 24, wherein the distinguishing between steps of a human

being and a fall of a human being is based on filtering out a frequency corresponding to at least

one of walking modes and dropped objects.

46.   (New) The computer program product of claim 41, wherein the distinguishing between steps of a human being and a fall of a human being is based on filtering out a frequency corresponding to at least one of walking modes and dropped objects.